

# Daytona 500 Weather Hazards & Safety Advice

With a high volume of fans gathering at Daytona International Speedway for the legendary Daytona 500 race on February 26, 2012, it seems prudent to refresh everyone on **weather safety** and the **potential hazards** that weather can pose. With the race and associated festivities being held during the middle of winter, it is important to remember that even in Florida, it can be uncomfortably cold at times, and extended exposure to low temperatures can be dangerous. In addition, February is the peak of Florida's cool-season severe weather period, and lightning, hail, damaging winds and heavy rain could all be potential hazards. Be sure to remain observant of any alerts from track officials regarding hazardous weather conditions in order to keep everyone in your family or group safe.

**Lightning** is the leading cause of weather-related casualties in Florida, and therefore needs to be taken seriously. Although thunderstorms are not nearly as frequent during February as they are in the summer, they still occur occasionally and present just as much danger. Lightning travels much faster than the sound of thunder, so move quickly to a protected structure or inside your non-convertible vehicle immediately if thunder is heard or lightning is observed. Plan ahead so that you are not entering or leaving Daytona International Speedway during periods of lightning. Remain away from all electrical appliances and plumbing, including bathroom sinks and water fountains if lightning is imminent. Remember that lightning can strike far away from the rain area of a thunderstorm. When thunder roars, go indoors!



With large-scale frontal systems working their way across the peninsula during this time of year, fog can frequently develop at night and during the early morning. This creates visibility issues and can make driving a challenge. Nearby wildfires can also produce visibility concerns from smoke lingering near ground-level, most often between dusk and dawn.

#### Weather Forecast Resources for Hazardous Weather Planning

- > 7-day forecast for Daytona Beach
- ➤ Plan ahead up to 7-days by reviewing the Melbourne National Weather Service Hazardous Weather Outlook
- ➤ Follow daily updates via the Melbourne National Weather Service Weather Update and Graphicast

## February 26<sup>th</sup> Climatology

The following table shows the average high and low temperatures and the record high and low temperatures for February 26<sup>th</sup> at Daytona Beach. The number of days with rainfall and record temperature data have been compiled from the 90 year history of weather observations at Daytona Beach, while the average temperatures were calculated using a 30 year period from 1981 to 2010.

<u>Average</u>	<u>Average</u>	<u>Record</u>	<u>Record</u>	# Days with
High(°F)	Low (°F)	High (°F)	Low (°F)	Rain
72	52	89	28	19
		(1939)	(1967)	

#### **Weather Impacts to Previous Daytona 500 Races**

Throughout the 53 races in the history of this annual event, several were shortened due to weather impacts:

- 1965: 332.5 miles (133 laps) due to rain.
- 1966: 495 miles (198 laps) due to rain.
- 2003: 272.5 miles (109 laps) due to rain.
- 2009: 380 miles (152 laps) due to rain.

## Race history low temperature, wind chill, and fog occurrence

The chart below indicates the minimum temperatures that occurred on each race day since its beginning in 1959. The wind chill was computed using the minimum temperature for the date and average wind speed. If fog was observed at any point during the day, a YES is shown.

<u>Year</u>	<u>Date</u>	Low (°F)	Wind Chill (°F)	<u>Fog</u>
1959	22-Feb	51	47	
1960	24-Feb	51	47	Yes
1961	26-Feb	41	36	
1962	18-Feb	62	61	
1963	24-Feb	53	49	
1964	23-Feb	38	32	
1965	14-Feb	56	53	Yes
1966	27-Feb	47	42	Yes
1967	26-Feb	28	19	
1968	25-Feb	33	25	
1969	23-Feb	53	50	
1970	22-Feb	49	45	
1971	14-Feb	32	24	
1972	20-Feb	35	27	
1973	18-Feb	49	45	Yes
1974	17-Feb	41	35	
1975	16-Feb	62	61	
1976	15-Feb	47	44	Yes
1977	20-Feb	44	38	
1978	19-Feb	50	47	Yes
1979	18-Feb	48	43	Yes
1980	17-Feb	44	38	
1981	15-Feb	56	52	Yes
1982	14-Feb	48	45	
1983	20-Feb	46	42	Yes
1984	19-Feb	53	52	Yes
1985	17-Feb	33	29	
1986	16-Feb	44	40	
1987	15-Feb	44	40	
1988	14-Feb	33	28	
1989	19-Feb	59	57	Yes
1990	18-Feb	66	66	
1991	17-Feb	30	23	
1992	16-Feb	59	59	Yes
1993	14-Feb	44	40	
1994	20-Feb	65	65	Yes
1995	19-Feb	56	54	Yes
1996	18-Feb	32	26	Yes
1997	16-Feb	56	52	
1998	15-Feb	46	41	Yes
1999	14-Feb	40	34	
2000	20-Feb	55	52	
2001	18-Feb	49	44	
2002	17-Feb	45	41	

2003	16-Feb	64	64	Yes
2004	15-Feb	50	46	
2005	20-Feb	47	45	Yes
2006	19-Feb	55	52	Yes
2007	18-Feb	41	35	
2008	17-Feb	55	53	Yes
2009	15-Feb	60	60	Yes
2010	14-Feb	33	29	
2011	20-Feb	52	51	Yes
2012	26-Feb			
	Averages	48	44	Total 22



Temperature (°F)																			
	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
훉	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
Wind (mph)	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
폍	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
ž	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
	60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98
Frostbite Times 30 minutes 10 minutes 5 minutes																			
Wind Chill (°F) = $35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$																			
Where, T= Air Temperature (°F) V= Wind Speed (mph) Effective 11/01/01																			

As depicted by the wind chill chart (above), the wind chill during the race has never been low enough to bring about the possibility of frost bite with short-term exposure to the cold. However, there have been instances where caution must be taken to prevent extended exposure to temperatures below 40° F. The lowest wind chill recorded in the history of the race was 19° F in 1967.

<sup>\*</sup> Visit the Southeast Regional Climate Center webpage for additional climatological information on Daytona International Speedway races: http://www.sercc.com/DaytonaNASCARClimatology.pdf